

4.(original) The method of claim 2, wherein said first task queue and said second task queue are one task queue in said non-volatile memory.

5.(original) The method of claim 1, wherein said non-volatile memory includes a magnetic memory.

6. (original) The method of claim 1, wherein said peripheral device is a printer.

7. (original) The method of claim 1, wherein said peripheral device is an input/output (I/O) device.

8. (currently amended) A method to handle power failures during the performance of a task by a peripheral device, wherein said peripheral device receives electrical power with an "on" state and an "off" state from a power supply, and said peripheral device is part of a data processing system which also contains a non-volatile memory, said method comprising:

monitoring said power supply to determine whether said electrical power is changing from said "on" state to said "off" state, or changing from said "off" state to said "on" state;

if it is determined that said electrical power is changing from said "on" state to said "off" state,

examining a first task queue for said peripheral device to find at least one task for said peripheral device placed in said first task queue before it is determined that said electrical power is changing from said "on" state to said "off" state,

calculating the amount of electrical energy required for said at least one task,

performing said at least one task if sufficient electrical energy remains in said peripheral device to complete said at least one task, and

storing data describing said task in a second task queue in said non-volatile memory if insufficient electrical energy remains in the peripheral device to complete said at least one task;

if it is determined that said electrical power is changing from said "off" state to

said "on" state,

searching in said second task queue in said non-volatile memory for at least one stored task,

starting said peripheral device, retrieving said at least one stored task from said second task queue, if said at least one stored task is in said second task queue, and

performing said at least one stored task with said peripheral device.

9.(original) The method of claim 8, wherein said first task queue and said second task queue are one task queue in said non-volatile memory.

10. (currently amended) A data processing system that handles power failures when receiving electrical power with an "on" state and an "off" state from a power supply, comprising:

an electrical detection circuit for monitoring said power supply to determine whether said electrical power is changing from said "on" state to said "off" state, or changing from said "off" state to said "on" state;

a peripheral device, including a processor to calculate the amount of electrical energy required for said peripheral device to perform a task;

a first task queue for said peripheral device that can be read to find at least one task for said peripheral device if it is determined that said electrical power is changing from said "on" state to said "off" state, said one task having been placed in said first task queue before it is determined that said electrical power is changing from said "on" state to said "off" state; and

a non-volatile memory, including a second task queue for said peripheral device that can store data describing said task if insufficient electrical energy remains available to said peripheral device to complete said at least one task.

11. (original) The data processing system of claim 10, further comprising:

a read/write bus for reading a plurality of entries in said second task queue for at least one stored task, if said electrical power is changing from said "off" state to said "on" state;

a circuit to start said peripheral device and retrieve said at least one stored task from said second task queue, if said at least one stored task is in said second

task queue; and

a task scheduler to initiate the performance of said at least one stored task with said peripheral device.

12. (original) The data processing system of claim 10, further comprising an uninterruptible power supply externally connected to said peripheral device.

13.(cancelled)

14.(original) The data processing system of claim 10, wherein said electrical detection circuit is inside an uninterruptible power supply.

15. (original) The data processing system of claim 10, wherein a processor to calculate said amount of energy required to perform said task is located outside said peripheral device.

16. (original) The data processing system of claim 10, wherein said non-volatile memory includes a magnetic memory.

17. (currently amended) A data processing system, comprising:  
an uninterruptible power supply; ~~a non-volatile memory, and~~  
a peripheral device operatively coupled to the uninterruptible power supply,  
wherein said peripheral device is connected to a circuit to detect a change in electrical power supplied to said uninterruptible power supply;  
a non-volatile memory operatively coupled to the peripheral device;  
a task queue in said non-volatile memory configured to contain one or more tasks for said peripheral device; and  
a processor to calculate the amount of energy required by said peripheral device to perform a scheduled task in said task queue in said non-volatile memory.

18-20.(cancelled)

21.(new) A method to handle a power interruption to a printer having an uninterruptible power supply, comprising:

the printer receiving an indication that electrical power to the uninterruptible power supply has been interrupted;

printing all print jobs in a print queue associated with the printer for which there is enough power available to print from the uninterruptible power supply; and

saving to a non-volatile memory all print jobs in the print queue for which there is not enough power available to print from the uninterruptible power supply.

22.(new) A printing system, comprising:

an uninterruptible power supply;

a printer operatively connected to the uninterruptible power supply;

a print queue associated with the printer;

a detection circuit operatively connected to the printer to detect an interruption in power supplied to the uninterruptible power supply; and

a processor configured, in the event of an interruption in power supplied to the uninterruptible power supply, to

direct the printer to print all print jobs in the print queue for which there is enough power available to print from the uninterruptible power supply; and

save to a non-volatile memory all print jobs in the print queue for which there is not enough power available to print from the uninterruptible power supply.